

Distal Biceps Tendon Rupture Following Eccentric Loading Of The Elbow – A Case Report

¹Faheem NAN, ¹Teo SH, ¹Al-Fayyadh MZM, ¹Mohamed Ali MR, ¹Ng WM

¹Department of Orthopaedic Surgery, Faculty of Medicine, University of Malaya, Jalan Univerisiti, 50603 Kuala Lumpur

INTRODUCTION:

Distal biceps tendon ruptures are an uncommon injury occurring in middle aged males. Anatomic fixation of the biceps tendon to the radial tuberosity is advocated to restore strength and function in active young individuals. We report a case of a distal biceps tendon rupture repaired using a two-incision technique with bone tunnel fixation to the radial tuberosity.

CASE REPORT:

A 46-year-old man with no underlying illness presented with an acutely painful right elbow while trying to release a bowling ball with subsequent weakness in elbow flexion. Clinical examination revealed presence of a bulky deformity over the anterior distal arm. Active elbow flexion and forearm supination against resistance revealed weakness compared to the left side.

MRI confirmed a complete distal biceps tendon rupture off the radial tuberosity with retraction 8.2cm proximally. Early operative repair of the distal biceps tendon was scheduled. A two-incision technique was deployed, and the tendon fixed to its original footprint over the radial tuberosity via creation of a bone tunnel (Figure 1).



Figure 1. Bone tunnel created via a separate incision over lateral proximal forearm.

DISCUSSION:

Management of distal biceps tendon ruptures in the active young patient is almost always by operative repair. Nonoperative management leads to major decreases in supination and elbow flexion strength (1). Surgical options can be divided into one- or two-incision techniques. The one-incision technique utilizes an extensile volar Henry approach, and has higher complications compared to the two-incision technique (2). Studies also showed that two-incision techniques can replicate the biceps footprint over the radial tuberosity more anatomically (3). We opted for fixation of the distal biceps tendon to the radial tuberosity via passing the tendon through a bone tunnel burred into the radial tuberosity. This fixation method is commonly used with good to excellent outcomes.

CONCLUSION:

Anatomic repair of distal biceps tendon ruptures is imperative in restoring elbow flexion and forearm supination strength in the young and active patient. A two-incision bone tunnel fixation technique restores the anatomical footprint adequately and results in acceptable functional outcomes.

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ABSTRACT TRUNCATED